

SITE 300 WASTESTREAM DESCRIPTIONS

**Common Wastestreams and Corresponding Waste Description for the Waste Disposal Requisition -**

The following wastestream descriptions are based upon the waste descriptions written on Waste Disposal Requisitions in 1993 and 1994. The majority of waste produced on site can be described using one of the wastestream descriptions listed below. The information listed to the right of each wastestream description may be used to complete the waste description sections of the Waste Disposal Requisition. Waste-streams that are always either spent or unused/out of date waste are identified as such in the "Spent or Unused Waste" column. The appropriate "Generic Waste Description" (e.g. Inorganic Liquid, Organic Liquid, etc...) is given in the third column. Suggestions for the "Generator's Waste Description" is given in the fourth column. In the last column, examples or suggestions are given for the "Waste Matrix".

<b>INORGANIC LIQUIDS - Waste that is primarily inorganic and highly fluid (e.g. aqueous) with low suspended inorganic solids and low organic content (&lt;10%).</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
Aqueous inorganic solutions with high (≥1%) total dissolved solids. Includes photographic fixers and developers, surplus inorganic chemicals, weak acids and caustics, steam cleaning and soapy rinse water, and machine or shop waste coolants.	-	Inorganic Liquid	- waste water from (e.g. steam cleaning)	- (e.g. water 90%)
Aqueous waters with low (<1%) dissolved solids, including rinse waters from the following operations: copper vapor laser operation, metal finishing, machine coolant replacement, water jet cutting, printed circuit board fabrication, and equipment cleaning.	spent	Inorganic Liquid	- waste water from (e.g. metal finishing)	- (e.g. water 90%)
Waste water with low concentrations of halogenated and non-halogenated solvents from underground storage tank cleanup.	spent	Inorganic Liquid	- tank cleanout rinse water	- (e.g. water 90%)
Waste water with low concentrations of halogenated and non-halogenated solvents resulting from metal forming processes.	spent	Inorganic Liquid	- waste water from metal fabrication	- (e.g. water 90%)
Waste water with low concentrations of organic compounds, metals and/or other toxic materials from machining, drill rig and equipment cleaning, coolants, cleaning solutions, paint spray booth rinse water, and steam cleaning, and research operations	spent	Inorganic Liquid	- waste waters from... (e.g. paint)	- (e.g. water 90%)
Acidic aqueous rinse waters from research activities or research related production operations including (but not limited to): metal finishing operations.	spent	Inorganic Liquid	- aqueous (e.g. nitric acid rinse water from... (i.e. metal fabrication)	- (e.g. water 90%)
Acidic solutions and rinse waters with metals generated from intermittent fabrication activities including: surface metal cleaning in pipe and welding shops. Waste include chromic acid mixtures and nitric acid solutions from bright dip tanks.	spent	Inorganic Liquid	- aqueous (e.g. nitric acid rinse water from... (i.e. bright dip tanks)	- (e.g. water 90%)
Caustic aqueous inorganic corrosive solutions from cleaning and degreasing operations.	spent	Inorganic Liquid	- aqueous caustic rinse water from degreasing	- (e.g. water 90%)
Caustic aqueous solutions and rinse waters with metals generated from research activities, including (but not limited to): fabrication of printed circuit boards, photographic processing, electroplating, etching, and other metal finishing operations.	spent	Inorganic Liquid	- aqueous caustic rinse water from (e.g. etching)	- (e.g. water 90%)
Waste liquid mercury from laboratory and shop clean-up, clean out of sink traps, and collection of excess electron tubes and mercury switches.	-	Inorganic Liquid	- liquid mercury from (e.g. sink traps)	- (e.g. mercury 90%)

<b>ORGANIC LIQUIDS - Waste that is primarily organic (≥10) and is highly fluid, with low inorganic solids content and low-to-moderate water content.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
Concentrated solvent-water solution, ignitable, from product solvent extraction.	spent	Organic Liquid	- water/solvent(s) solution from product solvent extraction	- (e.g. ethyl ether 30% water 70%)
Halogenated solvents from decommissioning of degreasing process equipment.	spent	Organic Liquid	- (e.g. solvents from degreasing)	- (e.g. chloroform 50% trichloroethylene 50%)
Non-halogenated (often ignitable) solvents including (but not limited to): equipment cleaning and maintenance operations. Wastes include acetone, toluene, xylene, ethylene glycol, methyl ethyl ketone, and alcohol.	spent	Organic Liquid	- solvents from (e.g. equipment cleaning)	- (e.g. acetone 65% methanol 30%)
Ignitable halogenated/non-halogenated solvent mixture from on-site cleaning and degreasing operations. Waste stream includes (but not limited to): tetrachloroethylene, methylene chloride, chlorobenzene, acetone, isobutanol.	spent	Organic Liquid	- solvents from (e.g. equipment cleaning)	- (e.g. chloroform 65% methanol 30%)
On-site rinse and surface runoff waters that are potentially contaminated with oil. Waste includes steam cleaning water from washing of vehicles and machine parts. Waste may contain motor oil, hydraulic oil, and soaps.	spent	Organic Liquid	- oil contaminated water from (e.g. steam cleaning)	- (e.g. water 99% oil 1%)
Ignitable oil drained from decommissioned on-site electrical transformers. Waste includes (but not limited to): cadmium, lead, silver, and halogenated solvents.	spent	Organic Liquid	- oil from (e.g. transformers)	- (e.g. oil 100%)
Waste oil from oil changes, drainage of non-PCB transformers and capacitors, and disposal of excess or expired products. Waste stream includes transformer oil, motor oil, hydraulic oil, vacuum pump oil, and non-PCB transformers and capacitors water oil.	-	Organic Liquid	- oil from (e.g. transformers)	- (e.g. oil 100%)
Concentrated aqueous solution of other organics from discarding of off-specification material and other surface preparation operations.	-	Organic Liquid	- (e.g. Surface prep solution)	- (e.g. water 99%)
Organic paint, lacquer or varnish from on-site activities, including (but not limited to ): equipment clean-up, disposal of excess and waste paint. Waste includes lacquer thinner and paints. Waste may be ignitable.	-	Organic Liquid	- (e.g. leftover paints)	- (e.g. petroleum distillates 67% xylene 25%)
Organic paint thinner or petroleum distillates from clean-up of painting equipment and machine parts found in various laboratory and trade shops. Wastes include paint thinner, kerosene, mineral spirits, lacquer thinner, gasoline and Stoddard solvent.	-	Organic Liquid	- (e.g. leftover paintthinner)	- (e.g. xylene 67% mineral spirits 25%)
Non-halogenated organic liquids from research and maintenance: photographic processing, machining, paint shop operations, excesses, and clean-up, including photocopier toners, photofixers, curing agents, cutting fluids, paints, and rust preventatives.	-	Organic Liquid	- (e.g. liquid copy toner)	- (e.g. petroleum distillates 80%)

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Water with oil and/or diesel fuel from on site spill cleanups, collection of leaks from research equipment, and clean out of diesel storage tanks.	spent	Organic Liquid - water and oil from (e.g. clean out of diesel storage tanks)	(e.g. water 99% oil 1%)
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<b>INORGANIC SOLIDS - Waste that is primarily inorganic and solid, with low organic content (&lt;10%) and low-to-moderate water content; not pumpable.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
Soil, concrete, or sand contaminated with organic compounds generated from drilling operations, research, and cleanup: floor repair, soil sampling, oil shale distillation, and trash cleanup. Waste streams include spent oil shale/oil contaminated soil.	spent	Inorganic Solid	(e.g. soil removed from B679 ground breaking)	(e.g. soil 100%).
Spill cleanup of soil, concrete and sand contaminated with organic compounds.	spent	Inorganic Solid	(e.g. sand and charred wood from B679 fire)	(e.g. sand 90% charred wood 5%)
Ash, slag or other residue from incineration of wastes. Waste stream includes (but is not limited to): cadmium, chromium, lead, silver, and methylene chloride.	spent	Inorganic Solid	(e.g. ash from B679 incinerator)	(e.g. ash 90%)
Inorganic scrap generated from on-site laboratory remodeling and cleanup, and projectile testing experiments. Waste streams include metal scrap/bricks/shavings, excess material, old equipment, glass, electrodes, tanks, plumbing, and fluorescent lights.	spent	Inorganic Solid	(e.g. scrap metal from B679 decon)	(e.g. steel 80% copper 10%)
Low level radioactive lead pieces and bricks which are contaminated with depleted uranium and/or beryllium during on site explosion or projectile research activities. This waste is containerized and packed with either vermiculite or drysorb.	spent	Inorganic Solid	(e.g. lead bricks from weapons grade uranium shielding)	(e.g. lead 100%)
Scrap metal from on-site research and maintenance including equipment cleanup, construction, and demolition. Waste includes pipes, storage tanks, hoses, and tools.	spent	Inorganic Solid	(e.g. scrap metal from B679 decon)	(e.g. steel 80% copper 10%)
Empty metal containers from on-site research activities, including (but not limited to): packaging and shop wastes. Waste includes empty cans, buckets, drums, bottles, boxes, and and other containers.	spent	Inorganic Solid	(e.g. crushed lard cans for sample collection)	(e.g. steel 99%)
Discarded batteries received from on-site maintenance operations. Waste streams include lead-acid, dry cell, and alkaline batteries. Most batteries are spent or damaged.	-	Inorganic Solid	(e.g. drained lead acid batteries)	(e.g. lead 90% plastic 5%)
Spent filters and adsorbents generated by on-site research activities and facility maintenance: machine shop operations, and instrument maintenance and cleanup. Waste includes paper, dry-sit, chem-wipes, cleaning pads, rags, and and oil filters.	spent	Inorganic Solid	(e.g. oil filters and cleanup waste)	(e.g. oil filters 60% wipes 20% rags 10%)
Asbestos and material contaminated with asbestos, generated from on-site abatement activities. Waste stream includes (but is not limited to): pipe logging, floor tiles, rock, and tarpaper, blackboards and fiberglass.	-	Inorganic Solid	(e.g. ceiling asbestos insulation)	(e.g. asbestos 80% steel 10%)
Reactive salts/chemicals that are from on-site waste operations including unused/excess chemicals from printing & metal finishing and reactive laboratory chemicals (eg., phosphorous, titanium tetrachloride, sodium, and lithium hydride).	-	Inorganic Solid	(e.g. sodium in toluene)	(e.g. sodium 70% toluene 30%)
Inorganic metals and salts from on-site research activities, including (but not limited to): machine shop operations, lab cleanup, collection of out-of-date or excess products, laser operations and tooling replacement. Includes ferric salts and alloys.	-	Inorganic Solid	(e.g. iron pyrites from gold extraction)	(e.g. iron pyrites 99% potassium ferricyanide 1%)
Other waste inorganic solids from discontinued use of process equipment.	spent	Inorganic Solid	(e.g. residue from water tower)	(e.g. sodium borate 80% potassium monophosphate 15%)
Waste inorganic trash from on-site research and cleanup activities, including (but not limited to): printing press, laser, battery shop, and building maintenance operations. Includes a mixture of paper, work clothes, glass, filters, rubber materials.	spent	Inorganic Solid	(e.g. lab trash)	(e.g. glass 50% carbon fibers 25% steel 10%)

<b>ORGANIC SOLIDS - Waste that is primarily organic (≥10) and solid, with low-to-moderate inorganic content and water content; not pumpable.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
Reactive organic solids. Generated on site from lab cleanout and collection of excess products. Includes mainly RTV catalysts.	unused	Organic Solid	(e.g. RTV-2349 silicone rubber catalyst)	(e.g. tetrabutyl tin 90%)
Empty plastic containers from on-site cleanup or sample preparation activities. Waste stream consists of an empty plastic drums that may contain a residue of biodegradable steam cleaning soap.	-	Organic Solid	(e.g. empty poly drums)	(e.g. plastic 99%)
Decommissioned on-site electrical capacitors and transformers. Waste includes excess, inoperative, and leaking capacitor and insulating and castor oil. Equipment may have been subsequently drained.	spent	Organic Solid	(e.g. drained capacitors)	(e.g. steel 50% plastic 25% oil 1%)
Other non-halogenated organic solids from on-site biomedical research activities, and production derived, one time and intermittent processes. Waste streams include capacitors and used agar plates.	spent	Organic Solid	(e.g. dried agar plates)	(e.g. glass 80% agar 20%)

<b>INORGANIC SLUDGES - Waste that is primarily inorganic, with moderate-to-high water content and low organic content (&lt;10%); and pumpable.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
Sludge and sediment generated from clean out of steam cleaning pit and sump. This material is associated with decontaminating drill rigs and may contain trace concentrations of solvents , oils, barium, cadmium, chromium, and/or lead (<10% organics).	spent	Inorganic Sludge	(e.g. steam pit sludge)	(e.g. garnet 90% soil 5% dirt/grease 5%)
Other inorganic sludges (<10% organics) from sludge removal processes, cleaning and degreasing operations, surface coating/preparation or other surface processes. Waste includes metals, halogenated/non-halogenated solvents, metals (e.g. mercury, silver).	spent	Inorganic Sludge	(e.g. blast pit clean out sludge)	(e.g. sand/soil 80% lead shot 10% steel 5%)

<b>ORGANIC SLUDGES - Waste that is primarily organic (≥10), with low-to-moderate inorganic solids content and water content; and pumpable.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description</b>	<b>Generator's Waste Description</b>	<b>Waste Matrix</b>
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Sludges containing at least 10% organic constituents.	spent	Organic Sludge - (e.g. grease pit sludge) - (e.g. grease 50% water 40% soil/debris 10%)
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<b>INORGANIC GASES - Waste that is primarily inorganic with a low organic content (&lt;10%) and is a gas at atmospheric pressure.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description - Generator's Waste Description - Waste Matrix</b>
Inorganic gases from on-site research activities which may be reactive. Waste stream includes (but is not limited to): diborane, hydrogen sulfide, fluorine, nitrogen dioxide, sulfur dioxide, and decaborane.	-	Inorganic Gas - (e.g. diborane cylinder) - (e.g. diborane 100%)

<b>ORGANIC GASES - Waste that is primarily organic (≥10) with a low-to-moderate inorganic content and is a gas at atmospheric pressure.</b>	<b>Spent or Unused Waste</b>	<b>Generic Waste Description - Generator's Waste Description - Waste Matrix</b>
Organic gases from on-site research activities, including Laser experiments, welding, and disposal of excess lab materials. Waste consists primarily of propane.	-	Organic Gas - (e.g. propane) - (e.g. propane 100%)